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SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT 68-W5-0019

211234



START-02-F-03327

TRANSMITTAL MEMO

To: Eric Wilson, OSC
Response and Prevention Branch, U.S. EPA Region II

From: David Rosenberg, Data Reviewer
START Region II

Subject: Cornell Dubilier Site, South Plainfield, New Jersey
Data Validation Assessment

Date: January 18, 1999

The purpose of this memo is to transmit the following information:

- Data validation results for the following parameters:

TCL - Total PCBs	7 samples
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- Matrices and Number of Samples

Soil/Sediment	6 samples
Water	1 sample
- Sampling date: November 21, 1998

The final data assessment narrative and original analytical data package are attached.

cc: START PM Michael Mahnkopf
START FILE TDD #: 02-98-08-0053
TDD #: 02-98-12-0010
PCS #: 4344

U.S. ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

DATE: January 26, 1999

TO: Eric Wilson, OSC
USEPA Region II

FROM: David Rosenberg
START Data Review Team

SUBJECT: QA/QC Compliance Review Summary

As requested quality control and performance measures for the data packages noted have been examined and compared to EPA standards for compliance. Measures for the following general areas were evaluated as applicable:

Data Completeness	Blanks
Spectra Matching Quality	DFTPP and BFB Tuning
Surrogate Spikes	Chromatography
Matrix Spikes/Duplicates	Holding Times
Calibration	Compound ID (HSL, TIC)

Any statistical measures used to support the following conclusions are attached so that the review may be reviewed by others.

Summary of Results

	<u>I</u> <u>VOA</u>	<u>II</u> <u>BNA</u>	<u>III</u> <u>PEST/PCB</u>	<u>IV</u> <u>HERB</u>
Acceptable as Submitted	_____	_____	_____	_____
Acceptable with Comments	_____	_____	<u>X</u>	_____
Unacceptable, Action Pending	_____	_____	_____	_____
Unacceptable	_____	_____	_____	_____

Data Reviewed by:

DRosenberg

Date: 1-26-99

Approved By:

EWilson

Date: 1/26/99

Area Code/Phone No.:

(732) 225-6116

NARRATIVE

CASE No. 4338

SITE NAME: Cornell-Dubilier Site

South Plainfield, New Jersey

Laboratory Name: Ecology & Environment

INTRODUCTION:

The laboratory's portion of this Case consisted of 7 samples collected on November 21, 1998.

The laboratory reported No problem(s) with the receipt of these samples.

The laboratory reported a problem with the analyses of samples for PCBs. Many of the samples contained relatively large amounts of Aroclor 1254 which shares common PCB peaks with Aroclor 1260. The lab found it very difficult to quantitate the amount of Aroclor 1260 since the samples had to be diluted in order to keep the Aroclor 1254 within the calibration range.

The evaluator has commented on the criteria specified under each fraction heading. All criteria have been assessed, but no discussion is given where the evaluator has determined that criteria were adequately performed or require no comment. Details relevant to these comments are given on the forms followed.

Evaluation by Fraction:

III. Pesticides/PCB -

Y Holding Times

Y Instrument Performance

Y Surrogate Recovery

Y MS/MSD

Y Compound ID

Y Chromatography

Y Calibration Linearity

Y Blank

Y Retention Time Window

Y Analytical Sequence

Y RT Check for TCX and DCB

Comments:

1. Refer to Data Assessment Narrative.

CLP DATA ASSESSMENT

Functional Guidelines for Evaluating Organic Analysis

CASE # 4338 SDG # _____
LAB: Ecology & Environment SITE: Cornell-Dubilier

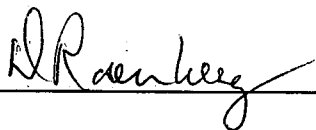
The current Functional Guidelines for evaluating organic data have been applied.

All data are valid and acceptable except those analytes which have been qualified with a "J" (estimated), "N" (presumptive evidence for the presence of the material), "U" (non-detects), "R" (unusable), or "JN" (presumptive evidence for the presence of the material at an estimated value). All action is detailed on the attached sheets.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Analytical data qualified as "JN" or "R" may not be used to demonstrate compliance with Toxicity Characteristic or Land Ban Regulations.

Reviewer's
Signature:



Date: 1/26/1999

Verified By: _____

Date: ____/____/19__

CLP DATA ASSESSMENT

On 21 November 1998, START personnel collected 6 soil samples, including one duplicate and extra volume for MS/MSD analysis, plus one rinse blank. The samples were submitted to Ecology & Environment Laboratory for PCB analysis.

Client identification (ID) and laboratory ID numbers:

<u>Client ID No.</u>	<u>Laboratory ID No.</u>	<u>Matrix</u>
CCSD1	19591	Soil
DDSS1	19592	Soil
HHSD1	19593	Soil
UUUSD1	19594	Soil
UUUSD3	19595	Soil- duplicate of UUUSD1
PPPND2	19596	Soil
RB-1	19597	Water- rinse blank

CLP DATA ASSESSMENT

1. HOLDING TIMES:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following analytes in the samples shown were qualified because of holding time:

TCL Data

Pest/PCBs - The following data were qualified as estimated "J" or rejected "R" due to exceeding holding time criteria:

<u>Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Extracted</u>	<u>Qualifier</u>	<u># Compounds</u>
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No problems were found.

Note: Continuous extraction of water samples must be started within seven (7) days of the date of collection. Soil/Sediment/Solid samples must be extracted within seven (7) days of collection. Extracts must be analyzed within forty (40) days of extraction.

2. BLANK CONTAMINATION:

Quality Assurance (QA) blanks [i.e., method, trip, field or rinse blanks] are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. If the concentration of the analyte is less than 5 times the blank contaminant level (10 times for common contaminants), the analytes are qualified as non-detects, "U". The following analytes in the samples shown were qualified with "U" for these reasons:

A) Method Blank Contamination

CLP DATA ASSESSMENT

Pest/PCBs - The following compounds were qualified as non-detected "U" in the associated samples due to method blank contamination:

<u>Compound</u>	<u>Associated Samples</u>
Aroclor-1016	<u>No problems were found.</u>
Aroclor-1221	<u>No problems were found.</u>
Aroclor-1232	<u>No problems were found.</u>
Aroclor-1242	<u>No problems were found.</u>
Aroclor-1248	<u>No problems were found.</u>
Aroclor-1254	<u>No problems were found.</u>
Aroclor-1260	<u>No problems were found.</u>

B) Field or Rinse Blank Contamination ("water blanks" or "distilled water blanks" are validated like any other sample)

Pest/PCBs - The following compounds were qualified as non-detected "U" in the associated samples due to rinse blank contamination:

<u>Compound</u>	<u>Associated Samples</u>
<u>No problems were found.</u>	

4. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

Response Factor:

CLP DATA ASSESSMENT

The response factor measures the instrument's response to specific chemical compounds. The response factor for the VOA/BNA Target Compound List (TCL) must be ≥ 0.05 in both the initial and continuing calibrations. A value ≤ 0.05 indicates a serious detection and quantitation problem (poor sensitivity). If the mean RRF of the initial calibration or the continuing calibration has a response factor < 0.05 for any analyte, those analytes detected in environmental samples will be qualified as estimated "J". All non-detects for those compounds will be rejected "R". The following analytes in the samples shown were qualified because of response factor:

Initial Calibration

No problems were found.

5. CALIBRATION:

PERCENT RELATIVE STANDARD DEVIATION (%RSD) AND PERCENT DIFFERENCE (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be $< 30\%$ and %D must be $< 25\%$. A value outside of these QC limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J"; and non-detects are flagged "UJ". If %RSD and/or %D grossly exceed QC criteria, non-detect data may be qualified "R".

For the PESTICIDE/PCB fraction, if %RSD exceeds 20% for all analytes except for the 2 surrogates (which must not exceed 30% RSD), qualify all associated positive results "J" and non-detects "UJ".

The following analytes in the samples shown were qualified for %RSD and %D:

Initial Calibration

Pest/PCBs - The following compounds were qualified as estimated "J" or rejected "R" in the associated samples because the linearity criteria or the percent relative standard deviation (%RSD) of the Initial Calibration is $> 20\%$ for either one or both GC columns:

<u>Compound</u>	<u>Percent Recovery</u>	<u>Qualifier</u>	<u>Associated</u>	<u>Sample(s)</u>
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No problems were found.

Continuing Calibration:

Pest/PCBs - The Percent Difference (%D) for PEM compound amounts in the continuing calibration verification analyses and/or the %D amounts in the Individual Standard Mixes of the continuing

CLP DATA ASSESSMENT

calibration verification analyses are $\geq 25\%$ for either one or both GC columns. The following compounds were either qualified as estimated "J" or rejected "R" due to exceeding Continuing Calibration QC criteria:

<u>Compound</u>	<u>RPD</u>	<u>Qualifier</u>	<u>Associated Sample(s)</u>
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No problems were found.

Pest/PCBs - The following compounds were qualified as estimated "J" in the associated samples because the Continuing Calibration %D is between 25-90% for these compounds on the primary GC column:

<u>Compound</u>	<u>Associated Samples</u>
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No problems were found.

6. SURROGATES/SYSTEM MONITORING COMPOUNDS (SMC):

All samples are spiked with surrogate/SMC compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate/SMC concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below. The following analytes for the samples shown were qualified because of surrogate/SMC recovery:

Pest/PCBs - The following compounds were either qualified as estimated "J" or rejected "R" due to Tetrachloro-m-xylene (TCX) and Decachlorobiphenyl (DCB) surrogate recoveries are both outside specified advisory QC limits (30-150%):

<u>Surrogate</u>	<u>Recovery</u>	<u>Qualifier</u>	<u>Compounds</u>	<u>Sample(s)</u>
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No problems were found.

CLP DATA ASSESSMENT

8. COMPOUND IDENTIFICATION:

B) PESTICIDE FRACTION:

The retention time of the reported compounds must fall within the calculated retention time windows. The following analytes in the samples shown were qualified because of compound identification:

Pest/PCBs - The following detected compounds were qualified due to failure to show at least 3 major peaks within the established windows corresponding to each multi-component analyte.

<u>Compound</u>	<u>%D</u>	<u>Qualifier</u>	<u>Sample(s)</u>
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No problems were found.

Note: These samples were analyzed using EPA Method 8082 which is a single column gas chromatographic procedure.

Note: During the initial calibration sequence, absolute retention times are determined for all single response pesticides, the surrogates, and at least three major peaks of each multi-component analyte. Windows are centered around the mean absolute retention time for the analyte established during the initial calibration. Analytes are identified when peaks are observed in the retention time window. Comparison of the sample retention times to the retention time windows established during the initial calibration revealed that no additional pesticide compounds were detected in the associated samples. In addition, no shifts for surrogate compound retention times were noted to occur that might require consideration of compounds outside respective retention time windows.

9. MATRIX SPIKE/SPIKE DUPLICATE (MS/MSD):

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for some additional qualification of the data. The following analytes, for the samples shown, were qualified because of MS/MSD:

Pest/PCBs - The following sample data were either qualified as estimated "J" or rejected "R" due to exceeding duplicate spike recovery QC criteria:

CLP DATA ASSESSMENT

No problems were found, except that the recovery of Aroclor 1260 was in excess due to overlapped peaks of the high sample amount of Aroclor 1254.

10. OTHER QC DATA OUT OF SPECIFICATION:

No problems were found.

Pest/PCBs - The following compounds were qualified as estimated "J" in the associated aqueous and/or soil/sediment field duplicate samples because the Relative Percent Difference (RPD) between the sample and field duplicate sample is > 50% for aqueous samples, or > 100% for soil/sediment samples:

<u>Compound</u>	<u>Matrix</u>	<u>% RPD</u>	<u>Associated Field Duplicate Samples</u>
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No problems were found.

The following soil/sediment/solid sample data (other than TCLP data) were either qualified as estimated "J" (% moisture between 50-90%) or rejected "R" (%moisture > 90%) because the sample contains more than 90% water:

<u>Fraction</u>	<u>Percent Moisture</u>	<u>Qualifier</u>	<u># Compounds</u>	<u>Sample(s)</u>
<u>Pest/PCBs</u>	58.4	J	Aroclor 1254	CCSD1

11. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT:

Due to professional judgement, the following compounds were not transferred from the indicated dilution sample analyses to the undiluted sample analyses because the reported values of these compounds are either diluted out in the associated dilution sample analyses or are qualified as non-detected "U" due to blank contamination QC criteria:

<u>Fraction</u>	<u>Compound</u>	<u>Dilution Sample(s)</u>	<u>Dilution Factor</u>
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No problems were found.

Due to professional judgement, the following positive data were rejected "R" due to possible carryover from

CLP DATA ASSESSMENT

a previous sample analysis that contained the compound(s) at high concentration(s):

<u>Fraction</u>	<u>Sample Compound</u>	<u>Sample Compound Concentration</u>	<u>Previous Sample Compound Concentration</u>
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No problems were found.

12. CONTRACT PROBLEMS/NON-COMPLIANCE:

The laboratory report did not quantify Aroclor 1260 because there were large amounts of Aroclor 1254 whose peaks overlapped with many of the Aroclor 1260 peaks. The samples were analyzed at high dilutions in order to bring the Aroclor 1254 within the calibration range. This resulted in diluting the Aroclor 1260 below the practical level of identification and quantification.

The initial laboratory report did not include the corrections of the data for reporting on the dry weight basis. The laboratory was required to measure the moisture content of the samples and they submitted corrected Form Is.

PCB DATA TABLE

PROJECT: Cornell-Dubilier

SDG# 4338

SOIL: Low Concentration

Sample #/Concentration (ug/Kg)

Sample Date	11/21/98	11/21/98	11/21/98	11/21/98	11/21/98	11/21/98				
Sample ID	CCSD1-A	DDSS1-A	HHSD1-A	UUUSD1-A	UUUSD3-A	PPPND2-A				
Lab ID	EE-98-19591	EE-98-19592	EE-98-19593	EE-98-19594	EE-98-19595	EE-98-19596				
% Moisture	58%	23%	40%	28%	22%	48%				
Dilution Factor	2000	2000	2000	10	10	1000				
Aroclor-1016	96000 U	52000 U	66000 U	280 U	260 U	38000 U				
Aroclor-1221	192000 U	100000 U	130000 U	560 U	510 U	77000 U				
Aroclor-1232	96000 U	52000 U	66000 U	280 U	260 U	38000 U				
Aroclor-1242	96000 U	52000 U	66000 U	280 U	260 U	38000 U				
Aroclor-1248	96000 U	52000 U	66000 U	280 U	260 U	38000 U				
Aroclor-1254	580000 J	250000	510000	2100	1200	250000				
Aroclor-1260	96000 U	52000 U	66000 U	280 U	260 U	38000 U				
Total PCB (mg/Kg)	580 J	250	510	2.10	1.20	250				

U - Non-detected compound.

B - Compound detected in the associated Method Blank.

J - Estimated value.

JN - Presumptive evidence of a compound at an estimated value.

R - Rejected compound.

PCB DATA TABLE

PROJECT: Cornell-Dubilier
WATER: Low Concentration

SDG# 4338

Sample #/Concentration (ug/L)

Sample Date	11/21/98									
Sample ID	RB-1									
Lab ID	EE-98-19597									
% Moisture										
Dilution Factor	1.0									
Aroclor-1016	0.5 U									
Aroclor-1221	1.0 U									
Aroclor-1232	0.5 U									
Aroclor-1242	0.5 U									
Aroclor-1248	0.5 U									
Aroclor-1254	0.5 U									
Aroclor-1260	0.5 U									

U - Non-detected compound.

B - Compound detected in the associated Method Blank.

J - Estimated value.

JN - Presumptive evidence of a compound at an estimated value.

R - Rejected compound.

REF No.:
4338
PO No.:
98700

CHAIN OF CUSTODY RECORD



SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT 68-W5-0019
Phone: 908-225-6116 Fax: 908-225-7037

Matrix Box No.:	Preservative Box No.:
1. Surface Water	1. HCl
2. Ground Water	2. HN03
3. Leachate	3. Na2SO4
4. Rinates	4. H2SO4
5. Soil/Sediment	5. Other (Specify)
6. Oil	6. Ice Only
7. Waste	N. Not Preserved
8. Other (Specify)	* See Comments

Send verbal and written results to:

Roy F. Weston, Inc., USEPA Region II START
Suite 201, 1090 King Georges Post Road, Edison, New Jersey 08837-3703
Attention: Smith Sumbary, START Analytical Coordinator

Sample Number	Sample Collection MM/DD/YY/Time	Sample Matrix (Enter box #)	Conc. Low-L Med-M High-H	Sample Type Comp-C Grab-G	Sample Preserv. (Enter box #)	KAS ANALYSIS					RCRA ANALYSIS			OTHER	
						VOA	INA	PEST	PCB	TAU	CN	IGN	COR		REAC
CCSD1-a	11/21/98 1000	5	L	G	6					X					
DDSS1-a	1005	↓								X					
HHSD1-a	1025	↓								X					
UUUSD1-a	1045	↓								X				MS/MSD	
UUUSD3-a	1045	↓								X					
PPPNDL-a	1120	↓								X					
RB-1	1100	4	↓	↓	↓					X					

Comments:

Person Assuming Responsibility for Sample:

M. Mahoney Time 1245 Date (MM/DD/YY) 11/21/98

Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody
ALL	<i>M. Mahoney</i>	1245	11/21/98	Fed exp.	Shipping
ALL	Fed ex	9:55	11/21/98	Kyle read	Received samples

Roy F. Weston, Inc.

FEDERAL PROGRAMS DIVISION

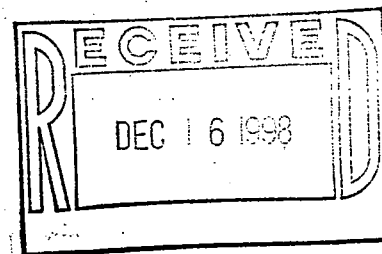
In Association with Resource Applications, Inc., R.E. Serrano Associates, PRC Environmental Management, C.C. Johnson & Malhotra, P.C., and GRB Environmental Services, Inc.

JOB NUMBER : 9803.017

Ecology and Environment, Inc.
SAMPLE TRACKING REPORT

SAMPLE NUMBER	CLIENT SAMPLE ID	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
8082 PCB	-S			
19591.01	CCSD1-A	11/21/98	11/24/98	12/03/98
19592.01	DDSS1-A	11/21/98	11/24/98	12/03/98
19593.01	HHSD1-A	11/21/98	11/24/98	12/03/98
19594.01	UUUSD1-A	11/21/98	11/24/98	12/02/98
19595.01	UUUSD3-A	11/21/98	11/24/98	12/02/98
19596.01	PPND2-A	11/21/98	11/24/98	12/03/98
8082 PCB	-W			
19597.01	RB-1	11/21/98	11/25/98	11/25/98

} duplicates



Narrative

PCBs

The column used for this analysis was a RTX-5, 30 m.

No PCB's were found in the water sample. Nothing unusual to report about the water sample analysis.

The reporting limits were raised according to the percent solids present in the samples.

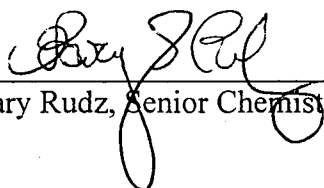
Aroclor 1254 was found in the soil samples.

The soil samples were analyzed at secondary dilutions and quantitation limits raised accordingly. In samples CCSD1-A, DDSS1-A, HHSD1-A and PPPND2-A the surrogate recoveries were diluted out.

The UUUSD1-A MS/MSD was analyzed at a secondary dilution. The sample contained Aroclor 1254 which co-eluted with the Aroclor 1260 spike recoveries causing them to be elevated outside the QC Limits.

The laboratory control samples (LCS) spike recoveries, remaining surrogates and method blank met QC criteria.

Initial and continuing calibration standards met method criteria. Initial calibration data for both waters and soils is in the water section of this report.



Gary Rudz, Senior Chemist

TEST CODE :WPCB0A1

JOB NUMBER :9803.017

ELAP ID : 10486

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

TEST NAME : 8082 PCB

UNITS : UG/L

SAMPLE ID LAB : EE-98-19597

MATRIX: WATER

SAMPLE ID CLIENT: RB-1

PARAMETER	RESULTS	Q	QNT. LIMIT
PCB-1242	ND		0.50
PCB-1254	ND		0.50
PCB-1221	ND		1.0
PCB-1232	ND		0.50
PCB-1248	ND		0.50
PCB-1260	ND		0.50
PCB-1016	ND		0.50

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

N = ANALYTE WAS NOT CONFIRMED BY ALTERNATE PROCEDURE

TEST CODE :SPCB0A1

JOB NUMBER :9803.017

ELAP ID : 10486

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT

%SOLIDS : 41.6%

TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-19591

MATRIX : SOLID

SAMPLE ID CLIENT: CCSD1-A

PARAMETER	RESULTS	Q	QNT. LIMIT
PCB-1242	ND		96000
PCB-1254	580000	J	96000
PCB-1221	ND		192000
PCB-1232	ND		96000
PCB-1248	ND		96000
PCB-1260	ND		96000
PCB-1016	ND		96000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

N = ANALYTE WAS NOT CONFIRMED BY ALTERNATE PROCEDURE

TEST CODE :SPCB0A1

JOB NUMBER :9803.017

ELAP ID : 10486

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT

%SOLIDS : 76.7%

TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-19592

MATRIX : SOLID

SAMPLE ID CLIENT: DDSS1-A

PARAMETER	RESULTS	Q	QNT. LIMIT
PCB-1242	ND		52000
PCB-1254	250000		52000
PCB-1221	ND		100000
PCB-1232	ND		52000
PCB-1248	ND		52000
PCB-1260	ND		52000
PCB-1016	ND		52000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

N = ANALYTE WAS NOT CONFIRMED BY ALTERNATE PROCEDURE

TEST CODE :SPCB0A1

JOB NUMBER :9803.017

ELAP ID : 10486

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT

%SOLIDS : 60.3%

TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-19593

MATRIX : SOLID

SAMPLE ID CLIENT: HHSD1-A

PARAMETER	RESULTS	Q	QNT. LIMIT
PCB-1242	ND		66000
PCB-1254	510000		66000
PCB-1221	ND		130000
PCB-1232	ND		66000
PCB-1248	ND		66000
PCB-1260	ND		66000
PCB-1016	ND		66000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

N = ANALYTE WAS NOT CONFIRMED BY ALTERNATE PROCEDURE

TEST CODE :SPCB0A1

JOB NUMBER :9803.017

ELAP ID : 10486

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT

%SOLIDS : 71.6%

TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-19594

MATRIX : SOLID

SAMPLE ID CLIENT: UUUSD1-A

PARAMETER	RESULTS	Q	QNT. LIMIT
PCB-1242	ND		280
PCB-1254	2100		280
PCB-1221	ND		560
PCB-1232	ND		280
PCB-1248	ND		280
PCB-1260	ND		280
PCB-1016	ND		280

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

N = ANALYTE WAS NOT CONFIRMED BY ALTERNATE PROCEDURE

TEST CODE :SPCB0A1

JOB NUMBER :9803.017

ELAP ID : 10486

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT

%SOLIDS : 78.1%

TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-19595

MATRIX : SOLID

SAMPLE ID CLIENT: UUUSD3-A

PARAMETER	RESULTS	Q	QNT. LIMIT
PCB-1242	ND		260
PCB-1254	1200		260
PCB-1221	ND		510
PCB-1232	ND		260
PCB-1248	ND		260
PCB-1260	ND		260
PCB-1016	ND		260

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

N = ANALYTE WAS NOT CONFIRMED BY ALTERNATE PROCEDURE

TEST CODE :SPCB0A1

JOB NUMBER :9803.017

ELAP ID : 10486

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : ROY F. WESTON - EDISON

RESULTS IN DRY WEIGHT

%SOLIDS : 52.1%

TEST NAME : 8082 PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-98-19596

MATRIX : SOLID

SAMPLE ID CLIENT: PPPND2-A

PARAMETER	RESULTS	Q	QNT. LIMIT
PCB-1242	ND		38000
PCB-1254	250000		38000
PCB-1221	ND		77000
PCB-1232	ND		38000
PCB-1248	ND		38000
PCB-1260	ND		38000
PCB-1016	ND		38000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

N = ANALYTE WAS NOT CONFIRMED BY ALTERNATE PROCEDURE